**Abstracts**

**PCV53**

**A PHARMACOECONOMIC ANALYSIS OF PROPHYLAXIS THERAPIES AND TREATMENT OF VENOUS THROMBOEMBOLISM (VTE) IN JAPANESE PATIENTS WITH CANCER**


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**OBJECTIVES:** The primary consequence of cancer is venous thromboembolism (VTE), manifesting as either deep vein thrombosis (DVT) or pulmonary embolism (PE). Compared with non-cancer patients, the incidence of VTE has been increasing in cancer patients over the past ten years and the risk of recurrent DVT and subsequent PE is up to 50%. The aim of this study was to investigate the cost-effectiveness of anticoagulant therapies to prevent VTE in cancer patients from the payer’s perspective.

**METHODS:** A two-state Markov model was performed to estimate health and economic consequences during a time horizon of one year (1-week cycles). Effective measures were reduced in recurrent hospitalizations, reduced PE and DVT events; and avoidance of deaths. Markov transition probabilities were obtained from a meta-analysis employing international published literature. Comparators employed were warfarin (5 mg/day), dalteparin (2500/1000/7500 UI/day), enoxaparin (20/40/60 mg/day), nadroparin (5000/1000 UI/day), unfractionated heparin plus warfarin (10000/36000/42000 UI/day-5 mg/day), acenocumarol (4 mg/day), and no prophylaxis intervention. Resource use and costs were collected from clinical records (n = 7000) from Social Security Mexican Institute (IMSS) hospitals and official institutional databases. The model was validated. Bootstrapping techniques were used to develop posterior sensitivity analyses. Acceptability curves were constructed. **RESULTS:** Incidence of PE and DVT were significant lower for patients with dalteparin (<0.05). Regarding the reduction of DVT events, dalteparin 2500, 5000 and 7000 UI/day showed an Incremental cost-effectiveness ratio (ICER) of US$45.81/US$44.9–US$46.8, US$40.91/US$40.0–US$41.7, and US$37.81/US$37.0–US$38.5 against warfarin (gold-standard, respectively). Nevertheless, enoxaparin in all its presentations and no prophylaxis intervention alternatives were dominated by dalteparin. Dalteparin showed the lowest number of deaths and hospitalization re-admissions (for DVT and PE) when compared to other anticoagulant therapies (p < 0.05) and showed a trend toward significant reduction of institutional costs in the short term. Second-order Monte Carlo sensitivity analyses showed the robustness of these results (elipse-method). **CONCLUSIONS:** Dalteparin demonstrated to be a cost-effective anticoagulant therapy to reduce incidence of PE and DVT events, deaths and recurrent hospitalizations in patients with cancer.

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**COST-EFFECTIVENESS OF DABIGATRAN ETEXILATE 150 MG FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM IN PATIENTS AGED OVER 75 YEARS UNDERGOING TOTAL HIP OR KNEE ARTHROPLASTY**


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**OBJECTIVES:** Dabigatran etexilate (DBG) is a new direct thrombin inhibitor which is administered intravenously at a fixed dose. EMMA has approved DBG at a standard dose of 220 mg once daily (od), and at a lower dose of 150 mg od for patients aged over 75. Recent economic analyses for the UK have demonstrated that DBG 220 mg od is cost-saving when compared with the commonly used agent, enoxaparin 40 mg od, with comparable efficacy and safety. This analysis investigates the cost-effectiveness of DBG 150 mg od for the prevention of venous thromboembolism (VTE) in the subset of patients aged over 75 undergoing total hip arthroplasty (THA) or total knee arthroplasty (TKA) from the perspective of the UK National Health Service.

**METHODS:** There was a comparison of DBG 150 mg od to enoxaparin 40 mg od using a decision model. Relative risks for VTE and bleeding events specific to patients aged over 75 were derived from sub-group analyses of the phase III DBG trials, RE-MODEL and RE-NOVATE. Probabilities of recurrent VTE and post-thrombotic syndrome were estimated from published longitudinal studies. **RESULTS:** DBG was less costly than enoxaparin in THA and substantially less so in TKA, primarily due to differences in administration costs. VTE and bleeding rates were similar for DBG and enoxaparin; the probability of cost-effectiveness was 89% in TKA and 99% in THA at a willingness-to-pay threshold of $20,000 per quality-adjusted life-year. These results were robust across a range of sensitivity analyses. **CONCLUSIONS:** Thromboprophylaxis with DBG 150 mg od in patients aged over 75 with moderate renal impairment is cost saving compared to enoxaparin 40 mg od, with comparable efficacy and safety.

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**HEALTH ECONOMIC EVALUATION OF CONTRAST MEDIA IN CORONAROGRAPHY: ISOSOMAL IODIXANOL VS. LOW-OSMOLAR MEDIA**

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**OBJECTIVES:** To perform health economic evaluation of isosomol Iodixanol vs. low-osmolar contrast media in patients undergoing coronaryography. **METHODS:** The decision tree modeling was performed using literature data on dosage, efficacy and safety. Iodixanol as one of the commonly used low-osmolar contrast in Russia was chosen for comparison. Efficacy of Iodixanol and Iopromide was equal, so safety issues were taken into consideration. Costs of procedure including side effects management were calculated using experts interview in Moscow clinics and hospital cost estimates. Cost-minimization analysis (CMA) from health care system perspective was performed. **RESULTS:** According to McCullough PA et al. (2006) the rate of contrast-induced nephropathy (CIN) was 1.4% for Iodixanol and 3.5% for Iopromide in common population, 2.8% and 8.4% in patients with chronic kidney disease (CKD), and 3.5% and 15.5% in patients with diabetes mellitus combined with CKD. Rhial CS et al. (2002) showed that CIN patients required higher costs and had poorer survival. They demonstrated 22% mortality compared to 1.4% of patients with normal renal function. Hypotension rate was 20.1% and 9.1%, acute heart failure was 11.4% and 3.1%, cardiac arrest was 11.4% and 1.5%, respiratory distress syndrome was 9.4% and 0.7%, and myocardial infarction was 3.9% and 0.9% respectively.